PATENT
Attorney Docket No. 079788

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Nigel Tooke

et al. Confirmation No.: 9448

Application No: 10/562134 Art Unit: 1637

Filed: 16 March 2007 Examiner: Chunduru, S.

Title: Oligonucleotide Ligation Assay by Detecting Released Pyrophosphate

Reply to Election Requirement

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

In response to the Office Action dated 2 February 2009, applicant provides the following election with traverse and remarks.

Applicant elects with traverse Group I as specified in the above mentioned Office Action, i.e. Claims 1-25, drawn to a method for determining the presence of genetic elements.

With reference to the above application, the Applicant submits that the invention as claimed does relate to one single inventive concept and as such meets the unity requirements of Rule 13.1 under the PCT.

As a result of the presence of a special technical feature in both claims 1-25 and claims 26-34, a clear technical relationship between claims 1-25 and claims 26-34 exists. The method claims for determining the presence of genetic elements comprises the feature of conversion of a ligation by-product as an indicator for the presence of said genetic element. This special technical feature is also found in the kit and in the composition claims, and thus unambiguously results in a technical relationship between said claims. Further, the conversion of the ligation by-product implicitly implies enabled real-time detection of said genetic elements, another special technical feature shared between claims 1-25 and claims 26-34.

Grossman *et al.* bears no resemblance to the present invention as claimed, as the reference discloses methods for oligonucleotide ligation assay (OLA) based on fluorescently monitored electrophoretic separation of the ligation products. The ligation probes described by

Grossman *et al.* further carry a fluorescent tag and a mobility-modifier, respectively, for facilitated electrophoretic separation, whereas the present invention concerns unlabelled oligonucleotides where real-time detection is based on chemoluminescence generated from the by-products of the ligation reaction. Thus, the present invention is not anticipated by Grossman *et al.* due to the presence of unlabeled oligonucleotides, analysis based on by-product conversion and not ligation product analysis, and the consequent real-time measurement of the presence of a genetic element.

The reference Grossman *et al.* does not anticipate the invention as claimed as it relates to the analysis of the obtained ligation product, based on electrophoretic separation, in order to allow detection of a genetic element. In contrast, the present invention relies on the detection of the ligation by-product using a real-time enzymatic reaction generating a chemoluminescence readout. In fact, Grossman *et al.* teaches away from the invention as the ligation product is analyzed, not the by-product.

Thus the applicant respectfully submits that the invention as claimed fulfils the requirements of unity both *a priori* and *a posteriori*, as the claims share the same technical feature and as this feature makes a clear contribution over prior art, both in terms of novelty and inventive step. In conclusion, the invention relates to a single inventive concept, and hence, restriction requirement is not applicable and it is requested that it be reconsidered.

In the event there are any questions concerning this election with travers, or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of the application may be expedited.

No additional fees are believed to be due at this time however if necessary to effect a timely response the Commissioner is authorised to deduct the necessary fees from Deposit account No. 501249.

Respectfully submitted,

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